## **CLAIMS**

1. A compound of formula (I) or a salt thereof:

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wherein:

10 R<sup>1</sup> is ethyl, n-propyl, isopropyl, C<sub>2</sub>fluoroalkyl, or -CH<sub>2</sub>CH<sub>2</sub>OH;

 $\rm R^2$  is a hydrogen atom (H), methyl, ethyl, n-propyl, isopropyl,  $\rm C_{1-2}$  fluoroalkyl, cyclopropyl or (cyclopropyl)methyl-;

15 NHR<sup>3</sup> has the sub-formula (nhr3):

wherein, in sub-formula (nhr3), the -NH- connection point of the NHR<sup>3</sup> group to the bicyclic ring system of formula (I) is underlined, and wherein

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R<sup>3a</sup> is methyl or ethyl;

R3b is a hydrogen atom (H), methyl or ethyl,

R<sup>3c</sup> is a hydrogen atom (H), methyl or ethyl,

R<sup>3d</sup> is a hydrogen atom (H), methyl or ethyl, and

25 R<sup>3e</sup> is a hydrogen atom (H) or methyl,

provided that:

- (a) R<sup>3b</sup> is methyl or ethyl; and/or (b) R<sup>3c</sup> and R<sup>3d</sup> are independently methyl or ethyl;
- 30 and provided that:

(c) when  $R^{3c}$  is ethyl and/or when  $R^{3d}$  is ethyl and/or when  $R^{3e}$  is methyl, then:  $R^{3a}$  is methyl and/or  $R^{3b}$  is a hydrogen atom (H) or methyl;

and wherein:

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- $m R^5$  is  $m C_{3-8}$ alkyl;  $m C_{3-8}$ cycloalkyl optionally substituted by a  $m C_{1-2}$ alkyl group; or  $m -(CH_2)_n^4$ - $m C_{3-8}$ cycloalkyl optionally substituted, in the -(CH<sub>2</sub>) $_n^4$  moiety or in the  $m C_{3-8}$ cycloalkyl moiety, by a  $m C_{1-2}$ alkyl group, wherein  $m n^4$  is 1, 2 or 3;
- or  $R^5$  is  $C_{2-6}$ alkyl substituted by one or two independent substituents  $R^{11}$ ;
  - wherein each substituent  $R^{11}$ , independently of any other  $R^{11}$  substituent present, is: hydroxy (OH);  $C_{1-6}$ alkoxy; phenyloxy; benzyloxy;  $-NR^{12}R^{13}$ ;  $-NR^{15}$ -C(O) $R^{16}$ ;  $-NR^{15}$ -C(O)-NH-R<sup>15</sup>; or  $-NR^{15}$ -SO<sub>2</sub> $R^{16}$ ; and wherein any  $R^{11}$  substituent which is OH, alkoxy or  $-NR^{12}R^{13}$  is not substituted at the carbon atom, of any  $R^{5}$  substituted alkyl, which is bonded to the nitrogen of NHR<sup>5</sup>;
  - or  $R^5$  is  $-(CH_2)_n^{12}-SO_2-NR^{12}R^{13}$  or  $-(CH_2)_n^{12}-SO_2R^{16}$ ; wherein  $n^{12}$  is 2, 3 or 4;
- or R<sup>5</sup> is -(CH<sub>2</sub>)<sub>n</sub><sup>13</sup>-Het wherein n<sup>13</sup> is 0, 1, 2, 3 or 4 and Het is a 4-, 5-, 6- or 7-membered saturated or partly-saturated heterocyclic ring containing one or two ring-hetero-atoms independently selected from O, S, and N; wherein any ring-hetero-atoms present are not bound to the -(CH<sub>2</sub>)<sub>n</sub><sup>13</sup>- moiety when n<sup>13</sup> is 1 and are not bound to the nitrogen of NHR<sup>5</sup> when n<sup>13</sup> is 0; wherein any ring-nitrogens which are present and which are not unsaturated (i.e. which do not partake in a double bond) are present as NR<sup>17</sup>; and wherein one or two of the carbon ring-atoms independently are optionally substituted by C<sub>1-2</sub>alkyl;
  - or  $\mathbb{R}^5$  has the sub-formula (x), (xa), (y), (y1), (z) or (za):

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wherein in sub-formula (x), n = 0, 1 or 2; in sub-formula (y) and (y1), m = 1 or 2; and in sub-formula (z), r = 0, 1 or 2;

wherein sub-formula (y) and (y1), independently, are optionally substituted by oxo (=O) at a ring carbon adjacent the 6-membered aromatic ring;

and wherein, in sub-formula (xa) and (za):

 $R^{4a}$  is a hydrogen atom (H); methyl, ethyl, n-propyl, isopropyl,  $C_{1-2}$ fluoroalkyl, cyclopropyl, -CH $_2$ OR $^{4aa}$ , -CH(Me)OR $^{4aa}$ , or -CH $_2$ CH $_2$ OR $^{4aa}$ , wherein  $R^{4aa}$  is a hydrogen atom (H), methyl (Me), or  $C_1$ fluoroalkyl; and

 $R^{5a}$  is a hydrogen atom (H);  $C_{1-8}$ alkyl;  $C_{1-3}$ fluoroalkyl;  $C_{3-8}$ cycloalkyl optionally substituted by a  $C_{1-2}$ alkyl group; or - $(CH_2)_n^{4a}$ - $C_{3-8}$ cycloalkyl optionally substituted, in the - $(CH_2)_n^{4a}$ - moiety or in the  $C_{3-8}$ cycloalkyl moiety, by a  $C_{1-2}$ alkyl group, wherein  $n^{4a}$  is 1 or 2;

or  $R^{5a}$  is  $C_{1-4}$ alkyl substituted by one substituent  $R^{11a}$ ; wherein  $R^{11a}$  is: hydroxy (OH);  $C_{1-6}$ alkoxy;  $C_{1-2}$ fluoroalkoxy; phenyloxy; (monofluoro- or difluoro-phenyl)oxy; (monomethyl- or dimethyl-phenyl)oxy; benzyloxy; -NR<sup>12</sup>R<sup>13</sup>; -NR<sup>15</sup>-C(O)R<sup>16</sup>; -NR<sup>15</sup>-C(O)-NH-R<sup>15</sup>; or -NR<sup>15</sup>-S(O)<sub>2</sub>R<sup>16</sup>;

or  $R^{5a}$  is  $C_{2-4}$ alkyl substituted on different carbon atoms by two hydroxy (OH) substituents;

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or  $R^{5a}$  is  $-(CH_2)_n^{11a}-C(O)R^{16}$ ;  $-(CH_2)_n^{11a}-C(O)NR^{12}R^{13}$ ;  $-CHR^{19a}-C(O)NR^{12}R^{13}$ ;  $-(CH_2)_n^{11a}-C(O)OR^{16}$ ;  $-(CH_2)_n^{11a}-C(O)OH$ ; wherein  $n^{11a}$  is 0, 1, 2 or 3 (wherein for each  $R^{5a}$  group  $n^{11a}$  is independent of the value of  $n^{11a}$  in other  $R^{5a}$  groups); and wherein  $R^{19a}$  is  $C_{1-2}$  alkyl;

or  $R^{5a}$  is  $-(CH_2)_n^{13a}$ -Het<sup>A</sup>, wherein  $n^{13a}$  is 0, 1 or 2 and Het<sup>A</sup> is a 4-, 5-, 6- or 7-membered saturated or unsaturated heterocyclic ring, other than  $-NR^{12}R^{13}$ , containing one or two ring-hetero-atoms independently selected from O, S, and N; wherein any ring-hetero-atoms present are not bound to the  $-(CH_2)_n^{13a}$ - moiety when  $n^{13a}$  is 0; wherein any ring-nitrogens which are present and which are not unsaturated (i.e. which do not partake in a double bond) and which are not connecting nitrogens (i.e. which are not nitrogens bound to the  $-(CH_2)_n^{13a}$ - moiety or to the carbon atom to which  $R^{5a}$  is attached) are present as  $NR^{17a}$ ; and wherein one or two of the carbon ring-atoms are independently optionally substituted by  $C_{1-2}$ alkyl;

or  $R^{5a}$  is phenyl (Ph), -CH<sub>2</sub>-Ph, -CHMe-Ph, -CHEt-Ph, CMe<sub>2</sub>Ph, or -CH<sub>2</sub>CH<sub>2</sub>-Ph, wherein the phenyl ring Ph is optionally substituted with one or two substituents independently being: a halogen atom;  $C_{1-4}$ alkyl;  $C_{1-2}$ fluoroalkyl;  $C_{1-4}$ alkoxy;  $C_{1-2}$ fluoroalkoxy; cyclopropyl; cyclopropyloxy; -C(O)-C<sub>1-4</sub>alkyl; -C(O)OH; -C(O)-OC<sub>1-4</sub>alkyl;  $C_{1-4}$ alkyl-S(O)<sub>2</sub>-;  $C_{1-4}$ alkyl-S(O)<sub>2</sub>-NR<sup>8a</sup>-;  $R^{7a}$ R<sup>8a</sup>N-S(O)<sub>2</sub>-;  $R^{7a}$ R<sup>8a</sup>N-C(O)-; -NR<sup>8a</sup>-C(O)-C<sub>1-4</sub>alkyl;  $R^{7a}$ R<sup>8a</sup>N; OH; nitro (-NO<sub>2</sub>); or cyano (-CN);

or  $R^{4a}$  and  $R^{5a}$  taken together are  $-(CH_2)_p^1$  or  $-(CH_2)_p^3$ - $X^5$ - $(CH_2)_p^4$ -, in which:  $X^5$  is O or  $NR^{17a}$ ;  $p^1 = 2$ , 3, 4, 5 or 6, and  $p^3$  and  $p^4$  independently are 1, 2 or 3 provided that if  $p^3$  is 3 then  $p^4$  is 1 or 2 and if  $p^4$  is 3 then  $p^3$  is 1 or 2;

provided that at least one of  $R^{4a}$  and  $R^{5a}$  is not a hydrogen atom (H);

and wherein, in sub-formula (x) and in sub-formula (xa):

A is C-R<sup>6A</sup>, nitrogen (N) or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>),

B is C-R<sup>6B</sup>, nitrogen (N) or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>),

D is C-R<sup>6D</sup>, nitrogen (N) or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>),

E is C-R<sup>6E</sup>, nitrogen (N) or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>),

F is C-R<sup>6F</sup>, nitrogen (N) or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>),

wherein, R6A, R6B, R6D, R6E and R6F independently are: a hydrogen atom (H), a halogen atom; C<sub>1-6</sub>alkyl; C<sub>1-4</sub>fluoroalkyl; C<sub>3-6</sub>cycloalkyl; C<sub>1-4</sub>alkoxy; C<sub>1-2</sub>fluoroalkoxy; C<sub>3-6</sub>cycloalkyloxy; -C(O)R<sup>16a</sup>; -C(O)OR<sup>30</sup>; -S(O)<sub>2</sub>-R<sup>16a</sup>; R<sup>16a</sup>-S(O)<sub>2</sub>-NR<sup>15a</sup>-; R<sup>7</sup>R<sup>8</sup>N-S(O)<sub>2</sub>-; C<sub>1-2</sub>alkyl-C(O)-R<sup>15a</sup>N-S(O)<sub>2</sub>-; C<sub>1-4</sub>alkyl-S(O)-, Ph-S(O)-, R<sup>7</sup>R<sup>8</sup>N-CO-; -NR<sup>15a</sup>-C(O)R<sup>16a</sup>; R<sup>7</sup>R<sup>8</sup>N; nitro (-NO<sub>2</sub>); OH (including any tautomer thereof); C<sub>1-4</sub>alkoxymethyl; C<sub>1-4</sub>alkoxyethyl; C<sub>1-2</sub>alkyl-S(O)<sub>2</sub>-CH<sub>2</sub>-; R<sup>7</sup>R<sup>8</sup>N-S(O)<sub>2</sub>-CH<sub>2</sub>-; C<sub>1-2</sub>alkyl-S(O)<sub>2</sub>-NR<sup>15a</sup>-CH<sub>2</sub>-; -CH<sub>2</sub>-OH; -CH<sub>2</sub>CH<sub>2</sub>-OH; -CH<sub>2</sub>-NR<sup>7</sup>R<sup>8</sup>; -CH<sub>2</sub>-CH<sub>2</sub>-NR<sup>7</sup>R<sup>8</sup>; -CH<sub>2</sub>-C(O)OR<sup>30</sup>; -CH<sub>2</sub>-C(O)-NR<sup>7</sup>R<sup>8</sup>; -CH<sub>2</sub>-NR<sup>15a</sup>-C(O)-C<sub>1-3</sub>alkyl; -(CH<sub>2</sub>)<sub>n</sub><sup>14</sup>-Het<sup>1</sup> where n<sup>14</sup> is 0 or 1; cyano (-CN); Ar<sup>5b</sup>; or phenyl, pyridinyl or pyrimidinyl wherein the phenyl, pyridinyl or pyrimidinyl independently are optionally substituted by one or two of fluoro, chloro, C<sub>1-2</sub>alkyl, C<sub>1</sub>fluoroalkyl, C<sub>1-2</sub>alkoxy or C<sub>1</sub>fluoroalkoxy;

and/or two adjacent groups selected from  $R^{6A}$ ,  $R^{6B}$ ,  $R^{6D}$ ,  $R^{6E}$  and  $R^{6F}$  are taken together and are:  $-CH=CH=CH=CH_2-$ ,  $-(CH_2)_n^{14a}$ —where  $n^{14a}$  is 3, 4 or 5,  $-O-(CMe_2)-O-$ ,  $-O-(CH_2)_n^{14b}-O-$  where  $n^{14b}$  is 1 or 2;  $-CH=CH-NR^{15b}-$ ;  $-N=CH-NR^{15b}-$ ;  $-N=N-NR^{15b}-$ ; -CH=CH-O-; -N=CH-O-; -CH=CH-S-; or -N=CH-S-; wherein  $R^{15b}$  is H or  $C_{1-2alkyl}$ ;

20 provided that:

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at least two of A, B, D, E and F are independently C-H (carbon-hydrogen), C-F (carbon-fluorine), nitrogen (N), or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>);

and no more than two of A, B, D, E and F are independently nitrogen or nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>),

and no more than one of A, B, D, E and F is nitrogen-oxide (N<sup>+</sup>-O<sup>-</sup>);

and wherein, in sub-formula (z) and in sub-formula (za):

G is O or S or NR<sup>9</sup> wherein R<sup>9</sup> is a hydrogen atom (H), C<sub>1-4</sub>alkyl, or C<sub>1-2</sub>fluoroalkyl; J is C-R<sup>6J</sup>, C-[connection point to formula (I)], or nitrogen (N), L is C-R<sup>6L</sup>, C-[connection point to formula (I)], or nitrogen (N), M is C-R<sup>6M</sup>, C-[connection point to formula (I)], or nitrogen (N), Q is C-R<sup>6Q</sup>, C-[connection point to formula (I)], or nitrogen (N),

wherein, R6J, R6L, R6M and R6Q independently are: a hydrogen atom (H), a halogen atom; C<sub>1-4</sub>alkyl; C<sub>1-3</sub>fluoroalkyl; C<sub>3-6</sub>cycloalkyl; C<sub>1-4</sub>alkoxy; C<sub>1-2</sub>fluoroalkoxy; C<sub>3-6</sub>cycloalkyloxy; OH (including any tautomer thereof); or phenyl optionally

WO 2005/090353 PCT/GB2005/000976 - 101 -

substituted by one or two substituents independently being fluoro, chloro, C<sub>1-2</sub>alkyl,  $C_1$  fluoroalkyl,  $C_{1-2}$  alkoxy or  $C_1$  fluoroalkoxy;

provided that:

at least two of J, L, M and Q are independently C-H, C-F, C-C<sub>1-2</sub>alkyl, C-[connection point to formula (I)], or nitrogen (N); and no more than three of J, L, M and Q are nitrogen (N);

and wherein: 10

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R<sup>7</sup> and R<sup>8</sup> are independently a hydrogen atom (H); C<sub>1-4</sub>alkyl; C<sub>3-6</sub>cycloalkyl; or phenyl optionally substituted by one or two substituents independently being: fluoro, chloro,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl,  $C_{1-2}$ alkoxy or  $C_{1}$ fluoroalkoxy;

15 or  $\mathbb{R}^7$  and  $\mathbb{R}^8$  together are -(CH<sub>2</sub>) $_n{}^6$ - or -C(O)-(CH<sub>2</sub>) $_n{}^7$ - or -C(O)-(CH<sub>2</sub>) $_n{}^{10}$ -C(O)- or  $-(CH_2)_n^8 - X^7 - (CH_2)_n^9 - \text{ or } -C(O) - X^7 - (CH_2)_n^{10} - \text{ in which: } n^6 \text{ is } 3, 4, 5 \text{ or } 6, n^7 \text{ is } 2, 3,$ 4, or 5,  $n^8$  and  $n^9$  and  $n^{10}$  independently are 2 or 3, and  $X^7$  is O or  $NR^{14}$ ;

R<sup>7</sup>a is a hydrogen atom (H) or C<sub>1-4</sub>alkyl; 20

R8a is a hydrogen atom (H) or methyl;

 $R^{12}$  and  $R^{13}$  (independent of any other  $R^{12}$  or  $R^{13}$ ) independently are H;  $C_{1-4}$ alkyl; C3-6cycloalkyl; or phenyl optionally substituted by one or two substituents independently 25 being: fluoro, chloro,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl,  $C_{1-2}$ alkoxy or  $C_{1}$ fluoroalkoxy;

or  $\mathbb{R}^{12}$  and  $\mathbb{R}^{13}$  (independent of any other  $\mathbb{R}^{12}$  or  $\mathbb{R}^{13}$ ) together are -(CH<sub>2</sub>)<sub>n</sub><sup>6a</sup>- or -C(O)-(CH<sub>2</sub>) $_n$ <sup>7a</sup>- or -C(O)-(CH<sub>2</sub>) $_n$ <sup>10a</sup>-C(O)- or -(CH<sub>2</sub>) $_n$ <sup>8a</sup>-X<sup>12</sup>-(CH<sub>2</sub>) $_n$ <sup>9a</sup>- or -C(O)- $X^{12}$ -(CH<sub>2</sub>) $n^{10a}$ - in which:  $n^{6a}$  is 3, 4, 5 or 6,  $n^{7a}$  is 2, 3, 4, or 5,  $n^{8a}$  and  $n^{9a}$  and  $\mathrm{n}^{10\mathrm{a}}$  independently are 2 or 3 and  $\mathrm{X}^{12}$  is O or NR  $^{14\mathrm{a}}$ ;

 $R^{14}$ ,  $R^{14a}$  and  $R^{17a}$  (independent of any other  $R^{14}$ ,  $R^{14a}$  or  $R^{17a}$ ) independently are: a hydrogen atom (H); C<sub>1-4</sub>alkyl; C<sub>1-2</sub>fluoroalkyl; cyclopropyl; -C(O)-C<sub>1-4</sub>alkyl;

 $-C(O)NR^{7a}R^{8a}$ ; or  $-S(O)_2-C_{1-4}$ alkyl; 35

> R<sup>15</sup>, independent of any other R<sup>15</sup>, is a hydrogen atom (H); C<sub>1-4</sub>alkyl; C<sub>3-6</sub>cycloalkyl; or phenyl optionally substituted by one or two substituents independently being: a halogen atom,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl,  $C_{1-2}$ alkoxy or  $C_{1}$ fluoroalkoxy;

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 $\ensuremath{R^{15a}}$  , independent of any other  $\ensuremath{R^{15a}}$  , is a hydrogen atom (H) or  $\ensuremath{C_{1\text{-}4}alkyl};$ 

 $R^{16}$ , independent of any other  $R^{16}$ , is:  $C_{1\text{-}4}$ alkyl;  $C_{3\text{-}6}$ cycloalkyl;  $C_{3\text{-}6}$ cycloalkyl- $CH_2$ -; or phenyl or benzyl, wherein the phenyl and benzyl are independently optionally substituted on their ring by one or two substituents independently being fluoro, chloro, methyl,  $C_1$  fluoroalkyl, methoxy or  $C_1$  fluoroalkoxy;

R<sup>16a</sup>, independent of any other R<sup>16a</sup>, is:

 $C_{1-6}$ alkyl;

 $C_{3-6}$ cycloalkyl optionally substituted by one oxo (=O), OH or  $C_{1-2}$ alkyl substituent;

C<sub>3-6</sub>cycloalkyl-CH<sub>2</sub>-;

pyridinyl optionally substituted on a ring carbon atom by one of: a halogen atom,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl,  $C_{1-2}$ alkoxy or  $C_{1}$ fluoroalkoxy;

 $Ar^{5c}$ ;

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phenyl optionally substituted by one or two substituents independently being: a halogen atom,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl,  $C_{1-2}$ alkoxy or  $C_{1}$ fluoroalkoxy;

benzyl optionally substituted on its ring by one or two substituents independently being: a halogen atom,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl,  $C_{1-2}$ alkoxy or  $C_{1}$ fluoroalkoxy; or

a 4-, 5-, 6- or 7-membered saturated heterocyclic ring connected at a ring-carbon and containing one or two ring-hetero-atoms independently selected from O, S, and N; wherein any ring-nitrogens which are present are present as  $NR^{27}$  where  $R^{27}$  is H,  $C_{1-2}$ alkyl or -C(O)Me; and wherein the ring is optionally substituted at carbon by one  $C_{1-2}$ alkyl or oxo (=O) substituent, provided that any oxo (=O) substituent is substituted at a ring-carbon atom bonded to a ring-nitrogen;

 $\begin{array}{l} {\rm R}^{17}\text{, independent of any other } {\rm R}^{17}\text{, is a hydrogen atom (H); $C_{1$-4alkyl; $C_{1$-2}$fluoroalkyl; $C_{3$-6}$cycloalkyl; $-(CH_2)_p^6$-C(O)R$^{16}$ wherein $p^6$ is 0, 1, 2 or 3; $-(CH_2)_p^6$-C(O)NR$^{12}R$^{13}$; $-(CH_2)_p^6$-C(O)OR$^{16}$; $-(CH_2)_p^6$-C(O)OH$; $-SO_2R$^{16}$; $-C(O)$-CH$_2$-NR$^{12}R$^{13}$; $-(CH_2)_p^6$-C(O)OH$; $-SO_2R$^{16}$; $-C(O)$-CH$_2$-NR$^{12}R$^{13}$; $-(CH_2)_p^6$-C(O)OH$; $-SO_2R$^{16}$; $-C(O)$-CH$_2$-NR$^{12}R$^{13}$; $-(CH_2)_p^6$-C(O)OH$; $-SO_2R$^{16}$; $-(CH_2)_p^6$-C(O)OH$; $-(CH_2)_p^6$-C$ 

- -C(O)-CH<sub>2</sub>-NR<sup>15a</sup>-C(O)-C<sub>1-3</sub>alkyl; -C(O)-CH<sub>2</sub>-O-C<sub>1-3</sub>alkyl; or phenyl or benzyl wherein the phenyl or benzyl is optionally substituted on their ring by one or two substituents independently being: a halogen atom, C<sub>1-2</sub>alkyl, C<sub>1</sub>fluoroalkyl, C<sub>1-2</sub>alkoxy or C<sub>1</sub>fluoroalkoxy;
- R<sup>30</sup>, independent of any other R<sup>30</sup>, is a hydrogen atom (H),  $C_{1-4}$ alkyl or  $C_{3-6}$ cycloalkyl;

Ar<sup>5b</sup> and Ar<sup>5c</sup> independently is/are a 5-membered aromatic heterocyclic ring containing one O, S or NR<sup>15a</sup> in the 5-membered ring, wherein the 5-membered ring can optionally additionally contain one or two N atoms, and wherein the heterocyclic ring is optionally

- substituted on a ring carbon atom by one of: a halogen atom,  $C_{1-2}$ alkyl,  $C_{1}$ fluoroalkyl, -CH<sub>2</sub>OH, -CH<sub>2</sub>-OC<sub>1-2</sub>alkyl, OH (including the keto tautomer thereof) or -CH<sub>2</sub>-NR<sup>28</sup>R<sup>29</sup> wherein R<sup>28</sup> and R<sup>29</sup> independently are H or methyl; and
- Het<sup>1</sup>, independent of any other Het<sup>1</sup>, is a 4-, 5-, 6- or 7-membered saturated heterocyclic ring connected at a ring-carbon and containing one or two ring-hetero-atoms independently selected from O, S, and N; wherein any ring-nitrogens which are present are present as NR<sup>31</sup> where R<sup>31</sup> is H, C<sub>1-2</sub>alkyl or -C(O)Me; and wherein the ring is optionally substituted at carbon by one C<sub>1-2</sub>alkyl or oxo (=O) substituent, provided that any oxo (=O) substituent is substituted at a ring-carbon atom bonded to a ring-nitrogen.
  - 2. A compound or salt as claimed in claim 1, wherein R<sup>1</sup> is ethyl or C<sub>2</sub>fluoroalkyl.
- 15 3. A compound or salt as claimed in claim 1, wherein R<sup>1</sup> is ethyl.
  - 4. A compound or salt as claimed in claim 1, 2 or 3, wherein  $\mathbb{R}^2$  is a hydrogen atom (H) or methyl.
- 5. A compound or salt as claimed in claim 1, 2, 3 or 4, wherein R<sup>3a</sup> is methyl, R<sup>3b</sup> is a hydrogen atom (H) or methyl, and R<sup>3e</sup> is a hydrogen atom (H).
  - 6. A compound or salt as claimed in claim 1, 2, 3 or 4, wherein R<sup>3b</sup> is methyl or ethyl, R<sup>3c</sup> and R<sup>3d</sup> independently are a hydrogen atom (H) or methyl, and R<sup>3e</sup> is a hydrogen atom (H).
  - 7. A compound or salt as claimed in claim 6, wherein R<sup>3</sup> is t-butyl.

- 8. A compound or salt as claimed in claim 1, 2, 3, 4 or 5, wherein R<sup>3c</sup> and R<sup>3d</sup> are independently methyl or ethyl, R<sup>3a</sup> is methyl, and R<sup>3b</sup> is a hydrogen atom (H) or methyl.
  - 9. A compound or salt as claimed in claim 8, wherein  $\mathbb{R}^3$  is 1,2-dimethyl-propyl (that is, NHR<sup>3</sup> is (1,2-dimethylpropyl)amino which is  $\mathbb{NH}$ ).
- 35 10. A compound or salt as claimed in claim 1, 2, 3, 4, 5, 8 or 9, wherein R<sup>3c</sup> and R<sup>3d</sup> are independently methyl or ethyl, R<sup>3b</sup> is a hydrogen atom (H) and NHR<sup>3</sup> has the subformula (nhr<sup>3</sup>a):

wherein sub-formula (nhr3a) means that more than 50% of the compound or salt present has the stereochemistry shown at the carbon atom bearing the  $R^{3a}$  and  $R^{3b}$  groups.

- 11. A compound or salt as claimed in claim 10, wherein NHR<sup>3</sup> has the following subformula: NHR<sup>3</sup> is [(1S)-1,2-dimethylpropyl]amino.
- 10 12. A compound or salt as claimed in any preceding claim, wherein  $R^5$  is  $C_{3-8}$ alkyl;  $C_{5-6}$ cycloalkyl;  $(C_{5-6}$ cycloalkyl)methyl-;  $-(CH_2)_n^5-R^{11}$  wherein  $n^5$  is 2 or 3 and  $R^{11}$  is  $-NR^{15}-SO_2R^{16}$ ; or  $R^5$  has the sub-formula (x), (xa), (y), (y1), (z) or (za).
- 13. A compound or salt as claimed in claim 12, wherein R<sup>5</sup> has the sub-formula (x), (xa), (y), (y1), (z) or (za).
  - 14. A compound or salt as claimed in claim 13, wherein R<sup>5</sup> has the sub-formula (x), (xa), (y), or (z).
- 20 15. A compound or salt as claimed in claim 14, wherein R<sup>5</sup> has the sub-formula (x) or (xa).
  - 16. A compound or salt as claimed in any preceding claim, wherein n = 1, m = 1 and r = 1.
- 17. A compound or salt as claimed in claim 15, or claim 16 as dependent on claim 15, wherein:
- $R^5$  has the sub-formula (x) which is -(CH<sub>2</sub>)<sub>n</sub>-Ar<sup>X</sup>, or has the sub-formula (xa) which is -(CR<sup>4a</sup>R<sup>5a</sup>)-Ar<sup>X</sup>,
  - and ArX has the sub-formula (x1), (x2), (x3), (x4), (x5), (x6), (x7), (x8), (x9), (x10), (x11), (x12), (x13), (x14), (x15) or (x16):

18. A compound or salt as claimed in claim 17, wherein  $Ar^{X}$  has the sub-formula (x1).

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19. A compound or salt as claimed in any preceding claim, wherein, in sub-formula (x) and in sub-formula (xa), preferably, R6A, R6B, R6D, R6E and R6F, independently of each other, are: is a hydrogen atom (H), a fluorine, chlorine, bromine or iodine atom, methyl, ethyl, n-propyl, isopropyl, isobutyl, trifluoromethyl, -CH2OH, methoxy, ethoxy, n-propoxy, isopropoxy, C1fluoroalkoxy, nitro (-NO2), OH, C1-3alkylS(O)2-, C1-2alkylS(O)2-NH-, -CONH2, cyano (-CN), or C1-2alkylS(O)2-CH2-.

20. A compound or salt as claimed in claim 19, wherein R<sup>6A</sup>, R<sup>6B</sup>, R<sup>6D</sup>, R<sup>6E</sup> and R<sup>6F</sup>, independently of each other, are: a hydrogen atom (H), a fluorine, chlorine or bromine atom, methyl, ethyl, n-propyl, isopropyl, trifluoromethyl, -CH<sub>2</sub>OH, methoxy, ethoxy, n-propoxy, difluoromethoxy, nitro (-NO<sub>2</sub>), OH, MeS(O)<sub>2</sub>-, Me-S(O)<sub>2</sub>-NH- or Me-S(O)<sub>2</sub>-CH<sub>2</sub>-.

- 21. A compound or salt as claimed in any preceding claim, wherein R<sup>5</sup> has the sub-formula (x) and is: benzyl, (monoalkyl-phenyl)methyl, (monoalkyl-phenyl)methyl, (monoalkoxy-
- phenyl)methyl, [mono(fluoroalkoxy)-phenyl]methyl, [mono(N,N-dimethylamino)-phenyl]methyl, [mono(methyl-SO<sub>2</sub>-NH-)-phenyl]methyl, [mono(methyl-SO<sub>2</sub>-)-phenyl]methyl, (dialkyl-phenyl)methyl, (monoalkyl-monohalo-phenyl)methyl, [mono(fluoroalkyl)-monohalo-phenyl]methyl, (dihalo-phenyl)methyl, (dihalo-monoalkyl-phenyl)methyl, [dihalo-mono(hydroxymethyl)-phenyl]methyl, or (dialkoxy-phenyl)methyl.
  - 22. A compound or salt as claimed in claim 22, wherein  $\mathbb{R}^5$  is of sub-formula (x) and is: (monoC<sub>1-4</sub>alkyl-phenyl)methyl;
- $(monoC_1 fluoroalkyl-phenyl) methyl;\\ (monoC_{1-3} alkoxy-phenyl) methyl;\\ [mono(C_1 fluoroalkoxy)-phenyl] methyl;\\ (diC_{1-2} alkyl-phenyl) methyl;\\ (monoC_{1-4} alkyl-monohalo-phenyl) methyl;$
- $\begin{array}{ll} 20 & \hbox{(dihalo-phenyl)methyl;} \\ & \hbox{(dihalo-monoC$_{1-2}$alkyl-phenyl)methyl;} \ or \\ & \hbox{[dihalo-mono(hydroxymethyl)-phenyl]methyl.} \end{array}$ 
  - 23. A compound or salt as claimed in claim 1, which is:
- N-Benzyl-4-{[(1R)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  4-{[(1R)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 4-{[(1R)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[4-(trifluoromethyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  N-(2,3-Dihydro-1H-inden-2-yl)-4-{[(1R)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  4-{[(1R)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[4-(methylsulfonyl)benzyl]-1H-
- pyrazolo[3,4-b]pyridine-5-carboxamide,
  N-[4-(Difluoromethoxy)benzyl]-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1Hpyrazolo[3,4-b]pyridine-5-carboxamide,
  4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[(2-methyl-1,3-thiazol-4-yl)methyl]-1Hpyrazolo[3,4-b]pyridine-5-carboxamide,
- N-[(5-Chloropyridin-2-yl)methyl]-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,

- $N-(2-Chloro-6-fluorobenzyl)-4-\{[(1S)-1,2-dimethylpropyl]amino\}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,$
- 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-{1-[4-(methylsulfonyl)phenyl]ethyl}-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 5 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[(6-methoxypyridin-3-yl)methyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-{3-[(methylamino)carbonyl]benzyl}-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[(1R)-1-phenylpropyl]-1H-pyrazolo[3,4-
- 10 b]pyridine-5-carboxamide,

- 4-{[(1S)-1,2-Dimethylpropyl]amino}-N-(2,2-diphenylethyl)-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- $N-[2-(Dimethylamino)benzyl]-4-\{[(1S)-1,2-dimethylpropyl]amino\}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,$
- 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(4-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-N-(diphenylmethyl)-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-{4-[(methylamino)carbonyl]benzyl}-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- pyrazolo[3,4-b]pyridine-5-carboxamide,

  Methyl 4-({[(4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridin-5yl)carbonyl]amino}methyl)benzoate,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(4-methoxyphenyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 25 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(4-hydroxybenzyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - $\label{eq:continuous} $$4-\{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[3-(trifluoromethyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,$
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(4-methoxybenzyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - N-(3,4-Difluorobenzyl)-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - N-(2,6-Difluorobenzyl)-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[(1R)-1-phenylethyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - N-(2,5-Difluorobenzyl)-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(3-fluorobenzyl)-1H-pyrazolo[3,4-
- b]pyridine-5-carboxamide, 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[2-(trifluoromethyl)benzyl]-1Hpyrazolo[3,4-b]pyridine-5-carboxamide,

- $N-(5-Chloro-2,3-dihydro-1H-inden-2-yl)-4-\{[(1S)-1,2-dimethylpropyl]amino\}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,$
- Methyl 3-({[(4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridin-5-yl)carbonyl]amino}methyl)benzoate,
- 5 N-[2-(Aminocarbonyl)benzyl]-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - $\label{eq:continuous} $$4-\{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-\{4-[(methylsulfonyl)amino]benzyl\}-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,$
  - $4-\{[(1S)\text{-}1,2\text{-}Dimethylpropyl}] amino\}-1-ethyl-N-\{3-[(methylsulfonyl)amino}] benzyl\}-1H-(nethylsulfonyl)amino] benzyl\}-1H-(nethylsulfonyl)amino] benzyl\}-1H-(nethylsulfonyl)amino] benzyl\}-1H-(nethylsulfonyl)amino] benzyl\}-1H-(nethylsulfonyl)amino] benzyl] benzyl]$
- 10 pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[4-(trifluoromethyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - $N-(2,3-Dihydro-1H-inden-2-yl)-4-\{[(1S)-1,2-dimethylpropyl]amino\}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,$
- 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[4-(methylsulfonyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - N-Benzyl-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - $4-\{[(1S)-1,2-Dimethylpropyl]amino\}-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino\}-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino\}-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino\}-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino\}-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]amino]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-heathylpropyl]-1-ethyl-N-(4-fluorophenyl)-1-ethyl$
- 20 b]pyridine-5-carboxamide,

- N-[2-(Aminosulfonyl)ethyl]-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[(6-oxo-1,6-dihydropyridin-3-yl)methyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-{2-[(methylsulfonyl)amino]ethyl}-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(tetrahydro-2H-pyran-4-yl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-[(1-methyl-1H-pyrazol-4-yl)methyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
    - $4-\{[(1S)-1,2-Dimethylpropyl]amino\}-1-ethyl-N-[3-(methylsulfonyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide, \\$
    - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(pyridin-3-ylmethyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- N-[3-(Aminocarbonyl)benzyl]-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(tetrahydrofuran-2-ylmethyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - N-{4-[(Dimethylamino)sulfonyl]benzyl}-4-{[(1S)-1,2-dimethylpropyl]amino}-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 40 1H-pyrazolo[3,4-b]pyridine-5-carboxamide, 4-{[(1S)-1,2-Dimethylpropyl]amino}-1-ethyl-N-(2-ethylbutyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
  - 4-(tert-Butylamino)-1-ethyl-N-benzyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,

- 4-(tert-Butylamino)-1-ethyl-N-(4-fluorophenyl)-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 4-(tert-Butylamino)-1-ethyl-N-[4-(trifluoromethyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide,
- 5 4-(tert-Butylamino)-N-(2,3-dihydro-1H-inden-2-yl)-1-ethyl-1H-pyrazolo[3,4-b]pyridine-5-carboxamide, or
  - 4-(tert-Butylamino)-1-ethyl-N-[4-(methylsulfonyl)benzyl]-1H-pyrazolo[3,4-b]pyridine-5-carboxamide;
- 10 <u>or</u> a pharmaceutically acceptable salt thereof.

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- 24. A pharmaceutical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in any of claims 1 to 23, and one or more pharmaceutically acceptable carriers and/or excipients.
- 25. A compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in any of claims 1 to 23, for use as an active therapeutic substance in a mammal.
- 26. The use of a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in any of claims 1 to 23, in the manufacture of a medicament for the treatment and/or prophylaxis of an inflammatory and/or allergic disease in a mammal.
  - 27. The use as claimed in claim 26, wherein the inflammatory and/or allergic disease is chronic obstructive pulmonary disease (COPD), asthma, rheumatoid arthritis or allergic rhinitis in a human.
  - 28. The use of a compound of formula (I) or a pharmaceutically acceptable salt thereof, as defined in any of claims 1 to 23, in the manufacture of a medicament for the treatment and/or prophylaxis of asthma, chronic obstructive pulmonary disease (COPD), atopic dermatitis, urticaria, allergic rhinitis, allergic conjunctivitis, vernal conjunctivitis, eosinophilic granuloma, psoriasis, rheumatoid arthritis, septic shock, ulcerative colitis, Crohn's disease, reperfusion injury of the myocardium and brain, chronic glomerulonephritis, endotoxic shock, adult respiratory distress syndrome, multiple sclerosis, cognitive impairment in a neurological disorder, depression, or pain, in a mammal.
  - 29. A method of treatment and/or prophylaxis of an inflammatory and/or allergic disease in a human in need thereof, which method comprises administering to the human a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any of claims 1 to 23.